

REMARKS

The Office Action dated December 15, 2008 was received and carefully reviewed.

By this response, claims 19, 24, 25, and 29 are hereby amended to clarify the invention, and not for reasons of patentability. Claims 1-18 remain withdrawn for being directed to a non-elected invention. New claims 30-35 have been added by this reply, and do not include new matter. Accordingly, claims 1-35 are currently pending in the subject application.

Support for the amendments to claims 19 and 25 can be found at least on page 18, line 8 to page 19, line 3, as well as page 21, lines 6-24, and FIGS. 1B, 1C, 6D, 6E, 20B, 20C, 23D, and 23E of the present application. Support for the features recited in new claims 30 and 31 can be seen at least on page 6, lines 8-24 of the present application. Thus, no new matter is included in the amendments to claims 1-3, or in newly added claim 30.

Reconsideration and allowance of the subject application is hereby requested in view of the above amendments and the following remarks.

Specification

The title of the invention has been amended as seen above. Accordingly, Applicants respectfully request the withdrawal of the objection.

Claim Rejections - 35 U.S.C. § 102

Claims 19-21, 23, 25, 26, and 28 stand rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Suzuki et al. (U.S. Patent No. 6,952,036 B2) (*Suzuki*, hereafter). Applicants traverse this rejection for at least the reasons set forth below.

Applicants respectfully submit that present independent claims 19 and 25, and the claims dependent therefrom, are patentably distinguishable over *Suzuki*, since *Suzuki* fails to disclose, teach, or suggest all of the features recited in the pending claims. For example, independent claim 19 (emphasis added) recites:

19. A method for manufacturing a semiconductor device
comprising the steps of:

- forming a base layer over a substrate having an insulating surface;
- forming an insulating film over the base layer;
- forming a mask over the insulating film;
- forming a depression by selectively etching the insulating film using the mask;
- forming an embedded wiring in the depression by a droplet discharge method;**
- removing the mask after the step of forming the embedded wiring;**
- performing a planarization processing to an upper surface of the embedded wiring;
- forming a gate insulating film over the embedded wiring;
- and
- forming a semiconductor film over the gate insulating film.

Further, independent claim 25 (emphasis added) recites:

25. A method for manufacturing a semiconductor device comprising the steps of:

- forming an insulating film over a substrate having an insulating surface;
- forming a mask over the insulating film;
- forming a depression by selectively etching the insulating film using the mask;
- forming an embedded wiring in the depression by a droplet discharge method;**
- removing the mask after the step of forming the embedded wiring;**
- performing a planarization processing to an upper surface of the embedded wiring;
- forming a gate insulating film over the embedded wiring;
- and
- forming a semiconductor film over the gate insulating film,

wherein the embedded wiring includes resin.

Thus, independent claims 19 and 25 are directed to, *inter alia*, the features of forming an embedded wiring in the depression by a droplet discharge method, and removing the mask after the step of forming the embedded wiring. Applicants contend that *Suzuki* neither discloses, teaches, nor suggests at least the features of forming an embedded wiring in the depression by a droplet discharge method, and removing the mask after the step of forming the embedded wiring,

as recited in present independent claims 19 and 25.

First and foremost, regarding the rejection of independent claims 19 and 25, it is Applicants' contention that the Examiner has made an improper rejection of claims 19 and 25 under 35 U.S.C. § 102(e), since the Examiner admits that *Suzuki* does not anticipate each and every feature recited in the independent claims.

Specifically, the Examiner purports, while discussing the disclosure of *Suzuki*, that a "forming an embedded wiring embodied initially as layer (44a), in the depression by 'any known technique' (col. 8, lines 64-65)" (see the Office Action, e.g., page 3). Next, the Examiner states that "[s]ince the disclosed electroless plating technique of Suzuki et al. uses metal in a liquid solution, it may be performed by a droplet discharge technique" (see the Office Action, e.g., page 3).

However, since *Suzuki* merely discloses an electroless plating technique, and not "forming an embedded wiring in the depression by a droplet discharge method", each and every feature of present independent claims 19 and 25 are not anticipated by *Suzuki*. Consequently, the Examiner's rejection of independent claims 19 and 25 under 35 U.S.C. § 102(e) as being anticipated by *Suzuki* is improper. It is respectfully requested that the next Office Action not be made final, in order to afford Applicants a fair and reasonable examination of each and every claimed features.

Moreover, Applicants respectfully submit that the present invention recites the use of a nozzle for the droplet discharge technique (see the present specification). Consequently, since *Suzuki* merely teaches an electroless plating technique and is completely silent with regard to nozzles for discharging the material solution, *Suzuki* cannot anticipate at least the feature of "forming an embedded wiring in the depression by a droplet discharge method", as recited in present independent claims 19 and 25.

As seen in FIGS. 6A-6E in the subject application, the present invention affords the formation of a fine wiring pattern 75 by selectively etching insulating layer 74 (see the present application, e.g., page 23, lns. 28-30). The wiring pattern 75 of the present invention is formed

by a droplet discharge method as seen in FIG. 6D, whereby any extra droplets 76 adhering to the mask 73, are removed when along with the mask 73 (see the present application, e.g., page 24, lns. 1-2). Thus, the wiring pattern left 75 is does not have any extra droplets 76.

The Examiner purports that “Suzuki et al. further discloses removing the mask; performing a planarization processing (col. 9, lines 28-30) to an upper surface of the embedded wiring; forming a gate insulating film (47)(col. 9, line 67) over the embedded wiring; and forming a semiconductor film (active layer (50), which is the same as the active layer (17)(col. 5, lines 56-57)) over the gate insulating film” (see the Office Action, e.g., pages 2 and 3). However, *Suzuki* is completely silent with regard to removing the mask after the step of forming the embedded wiring, as recited in present independent claims 19 and 25.

For at least the reasons stated above, *Suzuki* neither anticipates nor renders obvious all of the features of the invention as presently claimed. Accordingly, Applicants respectfully request reconsideration and allowance of independent claims 19 and 25.

Further, claims 20, 21, 23, 24, and 26-28 are allowable at least by virtue of their dependency from one of the independent claims, but also because they are distinguishable over the prior art. Accordingly, Applicants respectfully request the withdrawal of the rejection, and the allowance of these claims.

In addition, new claims 30-35 are distinguishable over the prior art. Accordingly, the allowance of these claims is respectfully requested.

Claim Rejections - 35 U.S.C. § 103

Claims 22 and 27 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Suzuki* in view of Itagaki et al. (U.S. Pat. Pub. No. 2001/0029066 A1) (*Itagaki*, hereinafter). Claims 24 and 29 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Suzuki* in view of Yamazaki et al. (U.S. Patent No. 7,176,069 B2) (*Yamazaki*, hereinafter). Applicants traverse these rejections for at least the reasons set forth below.

Applicants contend that neither *Itagaki* nor *Yamazaki* make up for the deficiencies of

Suzuki. Thus, claims 22, 24, 27, and 29 are allowable at least by virtue of its dependency to one of the independent claims, but also because it is distinguishable over the prior art. Accordingly, Applicants respectfully request reconsideration and allowance of the claim.

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. If, however, the Examiner deems that any issue remains after considering this response, the Examiner is invited to contact the undersigned attorney/agent to expedite the prosecution and engage in a joint effort to work out a mutually satisfactory solution.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 19-2380. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,
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